Animal Welfare in Planning Foreign Animal Disease Outbreak Management: What Can Epidemiologists Contribute?

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Across season and transport treatment, heavy piglets spent more time fighting \((p < .005)\) during the 1st day in housing and less time feeding \((p < .05)\) during the first 3 days in housing compared with light and medium piglets. These results suggest that large piglets within a litter may be less prepared for abrupt weaning relative to their smaller littermates, possibly due to a stronger dependency on a pure milk diet. Grouping heavy piglets may also result in high levels of initial aggression, causing reduced levels of maintenance behaviors such as feeding, drinking, and resting relative to light and medium piglets. Grouping early-weaned piglets according to weight may therefore exacerbate weaning-induced stress, causing reduced welfare, particularly in regard to the heavy piglets within litters.

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Planning foreign animal disease (FAD) outbreak management is essential to safeguard the health and welfare of nonhuman animals on the farm in the United States. In the event of an FAD, animal welfare, although not being ignored, may be suboptimal if there is not thoughtful and advance consideration

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from an animal welfare perspective. Inappropriate plans may subsequently cause unnecessary suffering or sacrifice of animals. Given the multidisciplinary training of epidemiologists, they are particularly valuable in the preparation for FAD outbreaks, which requires the involvement of people from different backgrounds.

This presentation focuses on what epidemiologists can contribute to FAD outbreak planning with an emphasis on animal welfare. We classify FAD outbreak management into 4 major areas of consideration: (a) disease detection and confirmation, (b) implementing control measures, (c) monitoring the FAD epidemic, and finally (d) the FAD recovery period. Historical outbreaks of foot-and-mouth disease and current planning for highly pathogenic avian influenza are used as illustrative examples to discuss animal welfare considerations and how epidemiologists can be involved for each of these areas.

More importantly, the presentation demonstrates why it is necessary to consider the listed areas simultaneously while addressing animal welfare in planning FAD outbreak management.

Animal Welfare Assessment Tool for On-Farm Euthanasia

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By definition, euthanasia means “good death.” According to the American Veterinary Medical Association, this would be death that occurs with minimal pain and distress. Euthanasia techniques should result in a rapid loss of consciousness followed by cardiac and respiratory arrest.

To ensure the welfare of the nonhuman animal during euthanasia, the process must include the ability to induce loss of consciousness and death with minimal pain, distress, anxiety, or apprehension; must include timeliness of the onset of unconscious and death; must be reliable; and must be irreversible and compatible with species, age, and health status. Even though the criteria have been established, a tool has not been developed for producers to assess whether the criteria are being met within their current euthanasia program.

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